

## Introduction to Open Access and the transition to Open Science

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# Open Access

### Do you have access and who pays?

- Do you need to articles literature?
- Do you have access to the articles you need?
- Do you pay for the articles you access?
- Who pays for the articles you access?

### A problem

The period between 1986 - 2003 subscription prices increased more than 260%



North American Research Libraries



#### Another problem

Overall, for 2013 in Europe budgets have decreased. In the USA the numbers stayed the same. In Asia the budgets increased.



Source: https://lj.libraryjournal.com/2013/04/publishing/the-winds-of-change-periodicals-price-survey-2013/#\_

### Let's face it!

### Harvard University says it can't afford journal publishers' prices

University wants scientists to make their research open access and resign from publications that keep articles behind paywalls

Ian Sample, science correspondent The Guardian, Tuesday 24 April 2012 17.45 BST



Source: <u>https://www.theguardian.com/science/2012/apr/24/harvard-university-journal-publishers-prices</u>



### **Open Access**

"Open-access (OA) literature is digital, online, free of charge, and free of most copyright and licensing restrictions. What makes it possible is the internet and the consent of the author or copyright holder"

(Suber, 2007)



### **Open Access and Hybrid Journals**



**Open Access Journals** offer peer-reviewed research. 30% charge and Article Processing Charge (APC), 70% do not.

**Hybrid Journals** - subscription based journals that offer an open route. Always charge APCs

\* Who covers APCs? 59% paid by the funder, 24% by institution, 12% by author

### **Directory of Open Access Journals**

#### DOAJ DIRECTORY OF OPEN ACCESS JOURNALS



### **Open Access Repositories**

- Do NOT perform peer-review
- Pre-prints, post-prints, final version
- Standardised: OAI-PMH compatible
- 7/8 of 40% UK's OA literature, world's 20%



Source: http://pasteur4oa.eu/sites/pasteur4oa/files/resource/Costs%20of%20OA%20final\_0.pdf



### **Creative Commons licenses**





#### SHERPA RoMEO

#### Journal titles or ISSNs O Publisher names

western journal of communication

● Exact title ○ starts with ○ contains ○ ISSN

Advanced Search Search

Journal: Western Journal of Communication (ISSN: 1057-0314, ESSN: 1745-1027) RoMEO: This is a RoMEO green journal Paid OA: A paid open access option is available for this journal. Author's Pre-print: J author can archive pre-print (ie pre-refereeing) Author's Post-print: // author can archive post-print (ie final draft post-refereeing) Publisher's <u>version/PDF</u> Version/PDF: General Conditions: Some individual journals may have policies prohibiting pre-print archiving · On author's personal website or departmental website immediately On institutional repository, subject-based repository or academic social network (Mendeley, ResearchGate or Academia.edu) after a 18 months embargo Publisher's version/PDF cannot be used On a non-profit server Published source must be acknowledged · Must link to publisher version Set statements to accompany deposits (see policy) The publisher will deposit in on behalf of authors to a designated institutional repository including PubMed Central, where a deposit agreement exists with the repository

Reset

#### What to know more on Open Access?

#### **OPEN ACCESS**

#### PETER SUBER

"No one has done more than Peter Suber to explain why free access to academic material benefits both the academy and society." —Clay Shirky

#### **By Peter Suber**

Free on the internet with CC-BY-NC license <u>bit.ly/oa-book</u>

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# **Research Data**

### What constitutes research data?

Research data refers to information, in particular facts or numbers, collected to be examined and considered as a basis for reasoning, discussion or calculation.

In a research context, examples of data include:

- Statistics
- Experiments
- Measurements
- Interview recordings
- Survey results

Source: http://ec.europa.eu/research/participants/data/ref/h2020/grants\_manual/hi/oa\_pilot/h2020-hi-oa-pilot-guide\_en.pdf



### H2020 Open Research Data Pilot (ORD)



#### **Open Access to Research Data**

Refers to the right to access and reuse digital research data under the terms and conditions set out in the Grant Agreement.

#### CHALLENGE

offers better

value for EU

research funds

a public

benefit

Wider access to scientific facts and knowledge helps researchers, innovators and the public find and re-use data, and check research results:

encourages

research across

scientific fields

essential for

solving today's

complex societa

challenges

#### SOLUTION Horizon 2020 already mandates open access to all scientific publications



What have Open Access to both Publications and Data?

- Build on previous research results
- Encourage collaboration and avoid duplication and effort
- Speed up innovation
- Involve citizens and society

Source: <u>http://ec.europa.eu/research/participants/data/ref/h2020/grants\_manual/hi/oa\_pilot/h2020-hi-oa-pilot-guide\_en.pdf</u> and <u>https://ec.europa.eu/research/press/2016/pdf/opendata-infographic\_072016.pdf</u>







## Open Science transition

### Research Lifecycle: as simple as it gets







### Research Lifecycle: focus on the steps





### What is Open Science?

The movement to make scientific research, data and dissemination accessible to all levels of an inquiring society.

[FOSTER, Open Science Definition https://www.fosteropenscience.eu/taxonomy/term/7]

Scope:

- **Transparency** in experimental methodology, observation, and collection of data
- Public availability and reusability of scientific data
- Public accessibility and transparency of scientific communication
- Using web-based tools to facilitate scientific collaboration
  [The OpenScience Project, What exactly is open science <a href="http://www.openscience.org/blog/?p=269">http://www.openscience.org/blog/?p=269</a>]



#### **Open Science taxonomy**



#### **Topics: adoption and gaps**





### Research Lifecycle: focus on the steps



### **General benefits**

- Increases research efficiency
- Promotes scholarly rigour and enhances research quality
- Enhances visibility and engagement
- Enables the creation of **new research questions**
- Enhances collaboration and community building

Source: Open To All? Case studies of openness in Research http://www.rin.ac.uk/system/files/attachments/NESTA-RIN\_Open\_Science\_V01\_0.pdf



### Benefits for early career researchers

- Become pioneers
- Have gained valuable experience
- Distinguish from the crowd
- Plan successful research proposals
- Receive higher citations
- Know how to comply with funders' policies
- Comply with funders' policies
- Demonstrate research and societal impact

Note: see also benefits of open access for early career researchers http://oro.open.ac.uk/44720/



#### Benefits for research consumers



#### Aggregating the world's open access research papers

We offer seamless access to millions of open access research papers, enrich the collected data for text-mining and provide unique services to the research community.



Source: https://core.ac.uk/



### **Benefits for Text and Data Miners**

Open content enables the collection of a large corpus and promotes the use of TDM.

- Unlocks hidden information and develops new knowledge
- Explores new horizons
- Improves research and evidence base
- Improves research process quality





#### Open Science is now a requirement



EUROPEAN COMMISSION Directorate-General for Research & Innovation

Guidelines on Open Access to Scientific Publications and Research Data in Horizon 2020

> Version 2.1 15 February 2016

#### **Research results:**

"each beneficiary must ensure open access to all peerreviewed scientific publications" (page 4)

#### Research data:

"A new feature of Horizon 2020 is the Open Research Data Pilot (ORD Pilot), designed to improve and maximise access to and reuse of research data generated by projects... The Pilot on Open Research Data will be monitored throughout Horizon 2020 with a view to further developing Commission policy on open research." (page 7)



#### Author disambiguation



## Connecting Research and Researchers

Source: https://orcid.org/



### Is it a wrap rage?





Image from Wikipedia https://en.wikipedia.org/wiki/Wrap\_rage



#### **Toolkit courses**

#### What is Open Science?

This introductory module will help you to understand what open science is and why it is something you should care about.



#### **Best Practice**

This module introduces policies and other environmental factors that influence good practice in open research.



#### Open Peer Review (OPR)

This module will introduce you to OPR and let you know how you can get started with it.



#### Data Protection and Ethics

This module helps you to get to grips with responsible data sharing.



#### Licensing

This module helps you to find the best license for your open research outputs.



#### **Open Data**

In this module, you'll focus on which data you can share and how you can go about doing this most effectively.



#### OSS and Workflows

This module introduces Open Source Software (OSS) and workflows as an emerging but critical component of Open Science.



#### **Open Innovation**

This module will show you how Responsible Research and Innovation is accelerated through Open Science.



#### **Open Access Publishing**

This module will help you become skilled in Open Access publication in the wider context of Open Science.



#### Preprints

This module introduces the practice of sharing preprints and helps you to see how it can support your research.





### Thank you!





